Project Description: Danbury Centralized Train Control (CTC) and Signalization Project.
Project Number: 0302-0007
July 2011

Project Scope:

This project will install a Centralized Train Control (CTC) and signal system on the Danbury Branch of the New Haven commuter rail line. Currently, the Danbury Branch does not have a signal system and trains operate under a system known as a manual block. Under manual block, multiple train movements on the branch are limited by the railroad's operating rules and manual block spacing. Additionally, because the Danbury Branch is a single track rail line, train meets along the branch are managed at passing sidings. Existing passing sidings are located in Norwalk, Wilton, Branchville and Danbury. Track switches at these locations must be manually operated by a member of the train crew.

The installation of the CTC Signal System will enable Metro-North Railroad's (MNR) Operation Control Center (OCC) to electronically monitor the location of all trains along the branch, providing cab signal indication to each train, based on the conditions of the track ahead. New remote-controlled track switches and signals will be installed at each of the branch's passing sidings. Operation of these switches will be under the control of the OCC. Track signals will operate in the same manner as signals on the New Haven main line. These signals indicate to a train to stop or proceed, based on the on-board cab signal indications inside the locomotive compartment, or cab car. Signals at the passing sidings will be interlocked with the track switches, and will indicate to the train crew whether to proceed or stop based on the track conditions present. Ultimately, passing sidings at Norwalk, Wilton, Branchville, Danbury, as well as a new passing siding in Bethel, will function as fully automatic control points on the Branch, allowing for efficient movement of trains at the passing sidings.

Lastly, the project work installs two signal power substations to provide power to the new signal equipment and electronic track circuits, via buried and aerial mounted power, signal and fiber-optic communication cable. One substation will be constructed at the Danbury Station in Danbury and the other at Science Road in Norwalk. In addition, the Norwalk substation will also have a diesel-powered emergency backup generator to supplement power in the event of a power disruption.

Once completed, the Danbury Branch signal system will operate consistent with the signal system in use on the New Haven main line. The Danbury Branch is operated and maintained by MNR, under a Service Agreement with the State of Connecticut. This project will be completed under two MNR-administered contracts and by MNR track and signal work forces.

Financial Sources:

* FTA:	$9,722,600.00
* ARRA:	$30,000,000.00
* State Match	$2,430,650.00
* Programmed FTA/State:	$25,000,000.00
* Total:	$67,153,250.00

Budget Analysis:

* Expenditures to Date: $23,714,360.47-
* Contract Value: Est. $58,024,317 (Includes two MNR contracts plus MNR FA Activities)

Schedule Analysis:

* Design: Completed
* Notice to Proceed: Material Procurement began on July 29, 2009
  Major construction began May 28, 2010
* % Complete: 37%
* Forecasted Beneficial Use: May 15, 2012

Challenges and Risks:

To coordinate and complete work activities to meet the project schedule while maintaining and operating commuter rail service.

Outlook:

The contractor needs to mobilize efficiently to complete the designated work activities within the next allowable track outage schedules for June 2011 (i.e., when trains are not operating and alternate bus service is provided).
Please click here to access the project calendar for June 2011 – July 2011. This calendar indicates the time and duration of proposed outages.
Aggressive Project construction activity will continue on thru the summer months and further until the Project is fully completed in the Fall of 2012.

Recent Construction Activity: May 2011 thru June 10, 2011

*MNR Cable Plow Contractor continued weekday off-peak outages and began the final phase of continuous weekend outages on June 4, 2011 for cable plowing of new signal cables. Off-peak weekend outages run until August 28, 2011. Commuter busing will occur during all outage periods. Signal and track construction activity along the Branch will be completed during this recent period;

* MNR Cable Plow Contractor and Subcontractors;
  - installed 2,900' of signal and power cable tray along the Branch
  - spotted 1,080' of signal and power cable tray for future install along the Branch
  - installed 9 high voltage, 9 low voltage and 2 fiber optic cable pull-box vaults
* MNR Signal Equipment Contractor continued work to manufacture signal house equipment.
* MNR C&S and Track Department continued work to install local power and signal cable runs, signal house/equipment foundations, installation of insulated track joints.
* URS Corporation installed the 6th printing of the project informational posters, completed and distributed the 5th edition of the project newsletter "Signals."

Future Activity:

* MNR Cable Plow Contractor to continue cable plowing, signal and track construction activity along the Branch during the continuous weekday & weekend off-peak outages. Commuter busing will occur during all outage periods.
* MNR Signal Equipment Contractor to continue manufacture of project signal equipment, anticipate delivery to begin by August 2011.
* MNR C&S and Track Department to continue installation of local signal cable and track materials, begin construction of Bethel passing siding on June 25, 2011.
* URS Corporation anticipates producing the 7th issue of the commuter project informational posters for July 2011 posting.

To see photos of recent Project activities, please click here
SIGNALS, a quarterly newsletter produced for the Danbury CTC signalization project, includes more information about recent activities. Please click here to access the current issue of signals. For all archived photos, newsletters, and calendars, please click here.
7/26/2011